We claim:

1. A dry protein product useful as a fat substitute or thickening agent, said product comprising:

a dry powder produced by hydrolyzing, gelling, drying and then powdering a whey protein;

said powder having a viscosity of at least about one-half pascal second at 46 reciprocal seconds for one half hour in a steady state shear test at 25°C when reconstituted as a 10% weight/weight solution in deionized water at a pH of 4; and

said powder having a phase angle of five to forty degrees at frequencies of from .01 to 20 Hertz in a frequency sweep test at 25°C when reconstituted as a 10% weight/weight solution in deionized water.

2. A dry protein product according to claim 1,

said powder having a viscosity of at least about one-half pascal second at 46 reciprocal seconds for one half hour in a steady state shear test at 25°C when reconstituted as a 10% weight/weight solution in deionized water at a pH of 8; and

said powder having a viscosity of at least about one-half pascal second at 46 reciprocal seconds for one half hour in a steady state shear test at 75°C when reconstituted as a 10% weight/weight solution in deionized water at a pH of 4.

3. A dry protein product according to claim 1, said dry powder having a particle size of 1 to 100 μm.

4. A dry protein product according to claim 1, said dry powder having a phase angle less than 20 in said frequency sweep test.

5. A dry protein product according to claim 1, further comprising from about 1 to 90 percent by weight of pregelatinized starch.

6. A method of making a dry powdered protein product useful as a fat substitute or thickening agent, said method comprising the steps of:

hydrolyzing a whey protein preparation to produce a hydrolyzed whey protein preparation; then

gelling said hydrolyzed whey protein preparation to form a whey protein gel; then

drying said whey protein gel to produced a dried whey protein gel; and

powdering said dried whey protein gel;

wherein the resultant powder has a viscosity of at least about one-half pascal second at 46 reciprocal seconds for one half hour in a steady state shear test at 25°C when reconstituted as a 10% weight/weight solution in deionized water at a pH of 4; and

said powder has a phase angle of five to forty degrees at frequencies of from .01 to 20 Hertz in a frequency sweep test at 25°C when reconstituted as a 10% weight/weight solution in deionized water.

7. A method according to claim 6, wherein said hydrolyzing step is an acid hydrolysis step.

8. A method according to claim 7, wherein said acid hydrolysis step is carried out with an acid selected from the group consisting of hydrochloric acid, sulfuric acid, citric acid, acetic acid, phosphoric acid, polyphosphoric acid, phytic acid, oxalic acid, succinic, maleic acid, fumaric acid, and lactic acid.

9. A method according to claim 6, wherein said hydrolyzing step is an enzyme hydrolysis step.

10. A method according to claim 6, wherein said gelling step is carried out under conditions that produce a weak fine-stranded gel.

11. A method according to claim 6, wherein said gelling step is carried out at a pH of 4 or less.

12. A method according to claim 6, wherein said gelling step is carried out under conditions that produce an FS-II gel.